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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,896	12/14/2001	Armin Rettig	FA-1047	6106
7590	11/22/2004		EXAMINER	
E. I. du Pont de Nemours & Co. Legal /Patent Records Center Barley Mill Plaza 25/1128 Wilmington, DE 19805			PARKER, FREDERICK JOHN	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,896

Applicant(s)

RETTIG ET AL.

Examiner

Frederick J. Parker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10-12-04 has been entered.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.

- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 10-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujisawa et al. 4,960,611 in view of Sukejima et al US 5852067.

Fujisawa et al. teaches a method of repairing a defect on a multi-layer automotive paint coating (col. 1, lines 10-20) by applying a powder-based coating formulation to the defective area and using infrared radiation to melt and cure the powder coating (col. 2, line 32; col. 3, lines 14-18; col. 7, line 20). The formulation may be a solid (e.g. powdery) or semi-solid composition

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based on resin particles (col. 3, 3-4, 62-63). Fujisawa's teaching of "infrared" range, defined as 700nm – 1mm, overlaps Applicant's claimed range of "near infrared" (760-150 nm) in claim 30. The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made if the overlapping portion of the infrared range disclosed by the reference were selected because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Wortheim* 191 USPQ 90. The coating composition is placed over and adjacent (figure 1c) the defect, the placement reasonably being "directly to at least one defective area", per claim 10. There is no requirement of the claim that the composition initially fill the defect or contact the defect surfaces, such that the reference meets the limitation since it is placed directly to a defect **area**.

The coating of Fujisawa is polished after repair, as required by claim 11 (col. 1, line 65; col. 7, line 31).

The coating to be repaired in the method of Fujisawa is multi-layered as outlined above, as required by claim 12, and may comprise a transparent topcoat, for example, as required by claims 13, 15, and 18 (see also col. 2, line 47). Regarding the limitation of claim 14 that the coating to be repaired is a powder coating, it is Examiner's position that it is well-known in the art of coating automobiles to use a powder coat, and that a powder would have been used or at least suggested by column 3, line 4 of the reference since powders are a solid.

Regarding claim 16, Fujisawa teaches using water in the powder coating, thus creating an aqueous "slurry" as required by Applicant's claim 16 (col. 3, line 25).

Regarding claim 17, while Fujisawa does not specifically teach that the solids content of the powder coating be the same as the coating to be repaired, Examiner notes that he does teach

matching the color of the repair powder, or lack thereof, to that of the original coating. It is Examiner's position that it would have been obvious to one of ordinary skill in the art to also match the repair composition contents to the original coating to create a flawless finish.

Regarding claim 19, Fujisawa teaches the use of epoxy resins and acrylic resins and the like as the binder and carboxyl-containing resin curing agents (col. 3). It is Examiner's position that carboxyl-containing curing agents are inclusive of resins having at least two carboxyl groups, as required by the claim. Additionally, while Fujisawa does not specifically teach the combination of epoxy and acrylic resin with the acrylic content listed, it is Examiner's position that it would have been obvious to an ordinary artisan that the combination of two suitable agents would have been expected to provide the superior qualities of both the ingredients for successful results on the finished product. Selection of the amount of epoxy, based on the desired properties of the resin compound would have been within the skill of an ordinary artisan desiring to optimize the matching characteristics to the original coating. Likewise, regarding claims 20-21, Fujisawa teaches that selection of a suitable curing agent will be based on the reactivity of the binder resin. Since Fujisawa teaches selection of a suitable carboxyl-containing curing agent based on an epoxy/acrylic resin, it would have been obvious to one of ordinary skill in the art to select the specific carboxylic acids required by the claims, for suitable use with the epoxy/acrylic resin of Applicant, because the group taught by Fujisawa is inclusive of such agents.

Regarding claim 22, the powder coating composition of Fujisawa is heat-curable, as outlined above and is cross-linked via an included cross linking agent (col. 3, line 37). Regarding claims 23-24 and 26 depending therefrom, Fujisawa teaches binder or base resins and curing agents which have at least two reactive functional groups between the two of them, such as a

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polyisocyanate (col. 3, lines 29-40), with a binder (base resin) of polyester (col. 3, line 30).

Fujisawa teaches the use of carboxyl-containing functional groups.

Regarding claims 25 and 27, requiring a range of binder to curing agent ratios and molecular weight, it is Examiner's position that selection of the optimum concentration and weight of ingredients would have been within the skill of an ordinary artisan based on the type of coating in need of a matching repair.

Regarding claim 28, Fujisawa teaches the inclusion of inorganic pigments, fillers, catalysts, and the like (col. 3).

Regarding claim 31, Fujisawa teaches curing a coating composition in a minute speck, meeting the limitation of a "point".

Regarding claim 32, Fujisawa teaches heating, such as by hot air, (col. 6, line 30) in addition to the IR curing. The use of heating is inclusive of a convection oven. It would have been obvious to an ordinary artisan to select convection from the class of "heaters" taught by Fujisawa with the expectation of successfully providing the hot air heating required by Fujisawa.

Specific particle sizes of the powder used in the repair formulation are not disclosed.

Sukejima et al teaches a resin-powder based putty ("semi-solid") repair coating composition for damaged areas of an automobile body, which is applied and cured by infrared radiation. The particle size of the resin powder "may be arbitrarily selected without particular limitation", but usually in the range of 30 microns or less, preferably 0.05-10 microns" to provide satisfactory finish properties (col. 1, 25-27). It is further taught that coarse particle sizes cause undesirable poor smoothness (col. 13, 43-54). Thus, Sukejima et al provides guidance as to selecting particle size of the repair composition, the recited values overlapping the particle size ranges of claims 10

and 29. The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made if the overlapping portion of the particle sizes disclosed by the reference were selected because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Wortheim* 191 USPQ 90. It is well settled that determination of optimum values of cause effective variables such as these process parameters is within the skill of one practicing in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to carry out the method of Fujisawa et al by incorporating the particle size guidance for the resin powders of the repair formulation taught by Sukejima et al to provide repaired surfaces with desirable coating smoothness and satisfactory finish properties.

Response to Arguments

Applicants arguments regarding the newly added particle size limitations and limitations regarding the composition being added directly to a “defective area” are addressed in the above rejections.

Applicants arguments that overlapping ranges do not constitute a prima facie case of obviousness is patently incorrect, and is well-settled, as in *re Wortheim* citation.

Fujisawa also meets the limitation of directly applying the repair coating to the “defective area” because “area” is conventionally defined as “any particular extent of space or surface” which is clearly the case in the method of Fujisawa et al. See also rejection above.


Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5585146 and 6162861 illustrate the state of the art regarding the relationship between coating particle size and smoothness for coating vehicles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on 571/272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Frederick J. Parker
Primary Examiner
Art Unit 1762

fjp